

CLAIMS

WHAT IS CLAIMED IS:

1. A composition comprising:
 - A. from about 0.1 to about 25% by weight of conductive carbon; and
 - B. a corrosion inhibitor, wherein said corrosion inhibitor is present in an amount effective to reduce the dissolution of metal from a metallic surface in contact with said composition.
2. The composition of claim 1 wherein said conductive carbon is selected from the group consisting of carbon black, graphite, and combinations thereof.
3. The composition of claim 1 wherein said corrosion inhibitor is present in an amount effective to prevent the dissolution of metal from said metallic surface in contact with said composition.
4. The composition of claim 1 wherein said amount of said corrosion inhibitor is from about 1 ppm to about 1% by weight.
5. The composition of claim 1 wherein said amount of said corrosion inhibitor is from about 50 ppm to about 4000 ppm.
6. The composition of claim 1 wherein said amount of said corrosion inhibitor is from about 200 ppm to about 600 ppm
7. The composition of claim 1 wherein said corrosion inhibitor is at least one of an imidazole, a triazole, an indole, an azole, a thiazole, or a tetrazole.
8. The composition of claim 1 wherein said corrosion inhibitor is benzotriazole or tolyltriazole.
9. The composition of claim 1 wherein said metal is copper.
10. A composition comprising:
 - A. a base; and

- B. a corrosion inhibitor, wherein said corrosion inhibitor is present in an amount effective to reduce the dissolution of metal from a metallic surface in contact with said composition.
11. The composition of claim 10, wherein said base is selected from the group consisting of monoethanolamine, hydroxide, carbonate, and combinations thereof.
 12. The composition of claim 10, further comprising a conditioning agent, a cleaning ingredient, or both.
 13. The composition of claim 10, further comprising an ingredient selected from a binding agent, an anionic dispersing agent, or both.
 14. The composition of claim 10 wherein said corrosion inhibitor is present in an amount effective to prevent the dissolution of metal from said metallic surface in contact with said composition.
 15. The composition of claim 10 wherein said amount of said inhibitor is from about 1 ppm to about 1% by weight.
 16. The composition of claim 10 wherein said amount of said corrosion inhibitor is from about 50 ppm to about 4000 ppm.
 17. The composition of claim 10 wherein said amount of said corrosion inhibitor is from about 200 ppm to about 600 ppm
 18. The composition of claim 10 wherein said corrosion inhibitor is at least one of an imidazole, a triazole, an indole, an azole, a thiazole, or a tetrazole.
 19. The composition of claim 10 wherein said corrosion inhibitor is selected from the group consisting of benzotriazole, sodium mercaptobenzothiazole, thiourea, tolyltriazole, 3-amino-1,2,4-triazole, and combinations thereof.
 20. The composition of claim 10 wherein said metal is copper.
 21. A method to reduce the dissolution of metal from a metallic surface in a corrosive composition, comprising:
providing a corrosive composition;

adding an effective amount of a corrosion inhibitor to said corrosive composition to reduce its corrosiveness; and

applying said composition to said metallic surface.

22. The method of claim 21 wherein said amount of said corrosion inhibitor is from about 1 ppm to about 1% by weight.
23. The method of claim 21 wherein said amount of said corrosion inhibitor is from about 50 ppm to about 4000 ppm by weight.
24. The method of claim 21 wherein said amount of said corrosion inhibitor is from about 200 ppm to about 600 ppm by weight.
25. The method of claim 21 wherein said corrosion inhibitor is at least one of an imidazole, a triazole, an indole, an azole, a thiazole, or a tetrazole.
26. The method of claim 21 wherein said corrosion inhibitor is selected from the group consisting of benzotriazole, sodium mercaptobenzothiazole, thiourea, tolyl triazole, 3-amino-1,2,4-triazole, and combinations thereof.
27. The method of claim 21 wherein said metal is copper.
28. A method to stabilize or recover a corrosive composition, comprising:
 - presenting a corrosive composition;
 - presenting a metallic surface to said corrosive composition under conditions effective to dissolve metal from said metallic surface;
 - dissolving metal from said metallic surface in said corrosive composition;
 - adding a corrosion inhibitor to said corrosive composition in an amount effective to stabilize or recover said corrosive composition.
29. The method of 28 wherein said corrosion inhibitor is added to prevent gel formation in said corrosive inhibitor.
30. The method of claim 28 wherein said corrosion inhibitor is added after gel formation has occurred in said corrosive composition.

31. The method of claim 30 wherein said corrosion inhibitor is added in an amount effective to at least partially reverse said gel formation.
32. The method of claim 28 wherein said amount of said corrosion inhibitor is from about 1 ppm to about 1% by weight.
33. The method of claim 28 wherein said amount of said corrosion inhibitor is from about 50 ppm to about 4000 ppm.
34. The method of claim 28 wherein said amount of said corrosion inhibitor is from about 200 ppm to about 600 ppm
35. The method of claim 28 wherein said corrosion inhibitor is at least one of an imidazole, a triazole, an indole, an azole, a thiazole, or a tetrazole.
36. The method of claim 28 wherein said corrosion inhibitor is selected from the group consisting of benzotriazole, sodium mercaptobenzothiazole, thiourea, tolyltriazole, 3-amino-1,2,4-triazole, and combinations thereof.
37. The method of claim 28 wherein said metal is copper.